(No Model.)

J. D. BAILEY.

THREE WAY SPLIT SWITCH.

No. 384,304. Patented June 12, 1888.

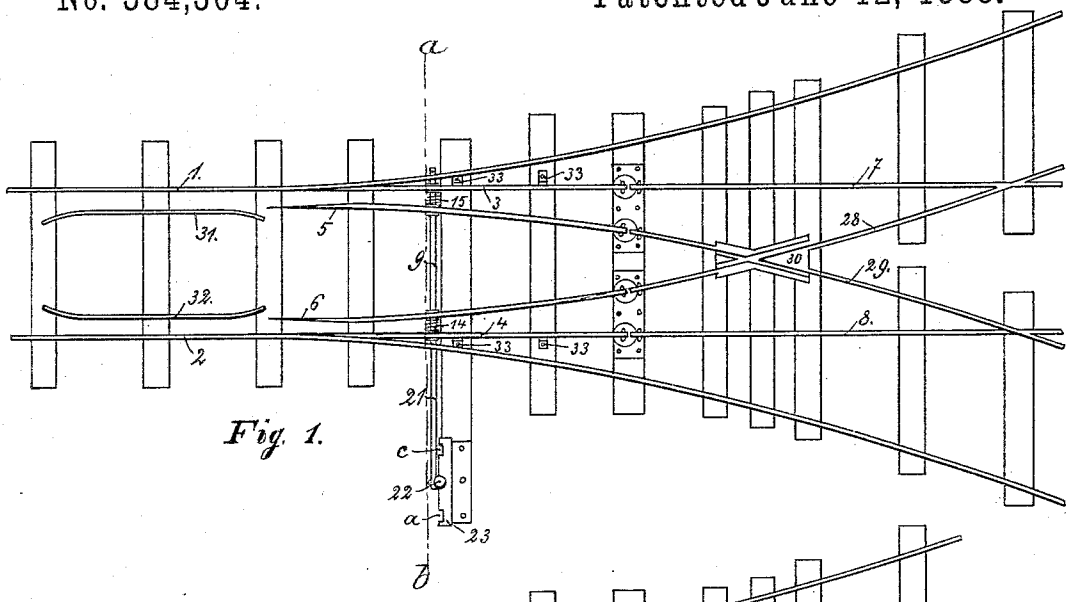


Fig. 1.

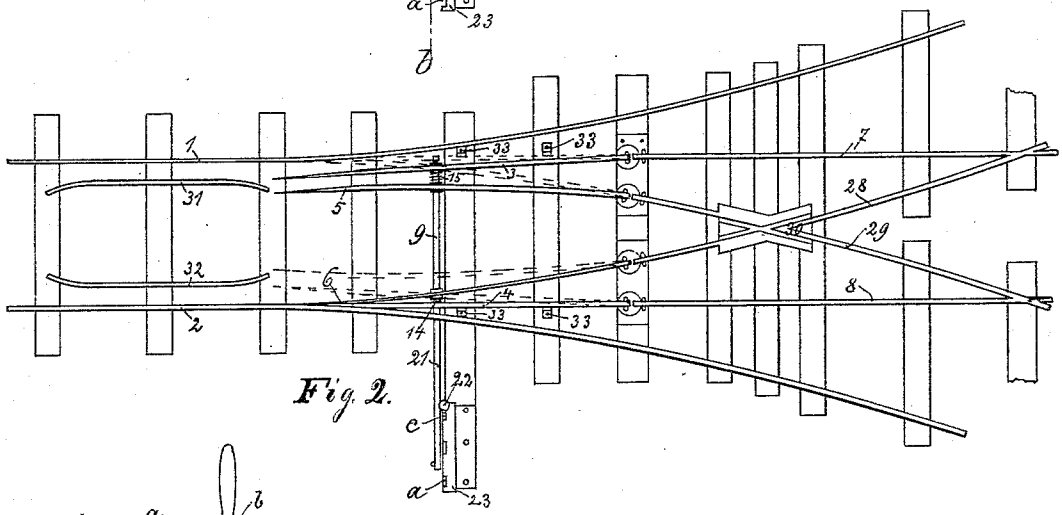
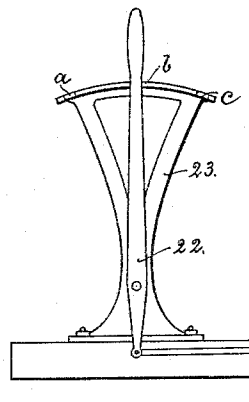


Fig. 2.



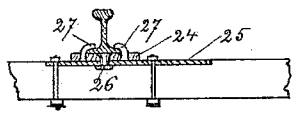


Fig. 4.

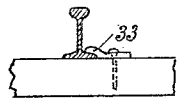


Fig. 5.

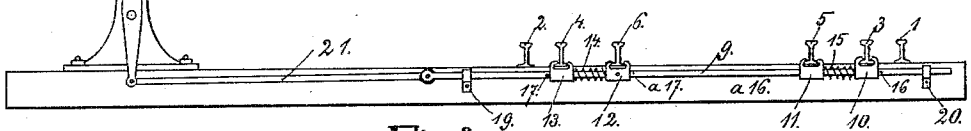


Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES D. BAILEY, OF UTICA, NEW YORK.

THREE-WAY SPLIT SWITCH.

SPECIFICATION forming part of Letters Patent No. 384,304, dated June 12, 1888.

Application filed February 16, 1888. Serial No. 264,227. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. BAILEY, of the city of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Three Way Split Switches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My device relates to an improvement in three-way split switches.

It is the object of my invention to furnish a three-way split switch that is simple and easy of operation, and one that is not liable to get out of order.

In the drawings, Figure 1 shows a plan view of my three-way split switch with both branches closed. Fig. 2 shows a plan view of the same with one of the branches open and the movement of the split rail in dotted lines. Fig. 3 shows a cross-section of the rails on a line, A B, substantially with the operating mechanism of the switch and the mechanism for operating the same. Fig. 4 shows a swiveled joint for securing an end of the movable split rails. Fig. 5 shows a lipped catch for limiting the movement and securing the split rail by engaging the lower flange of the rail.

Like figures of reference indicate like or similar parts in the several figures of the drawings.

In constructing my improved switch I provide a pair of rails, 1 and 2, that diverge as they reach the switch, each of the rails forming the outside rail of each of the branched tracks. There are two pair of split rails, 3 4 and 5 6. The pairs 3 and 4 are connected to pair 7 and 8, which as the track is usually used will be the main track, thus leaving a branch upon each side of the main track.

The two pair of split rails are fastened to the shifting-bar 9, substantially as follows: The rails 3, 4, 5, and 6 are held in clasps 10, 13, 11, and 12, respectively, which engage the lower flanges of the rail. Clasps 10 and 11 are movable upon shifting-bar 9, but are inclosed between stops 16 and 16^a. These stops may be pins, projections, or collar. Clasps 12 and 13 are also movable upon shifting-bar 9, and are inclosed between stops 17 and 17^a, which may also be constructed as stop 16 and 16^a. Springs 14 and 15 are provided, which are strained to keep clips 10 and 11 and clips 12 and 13 apart and up to the stops upon either side of the same. Shifting-bar 9 is provided with suitable guides, 19 and 20. A suitable connecting-rod, 21, is provided, connecting switch-lever 22 with the shifting-bar. Switch-lever 22 is pivoted in a suitable frame, 23, having catches *a*, *b*, and *c* for securing it in three fixed positions. Any other ordinary switch-target having means for securing the switch-lever or its equivalent in three fixed positions may be used. I provide a swivel-joint, as shown in Fig. 4, which is used at the point where the split rails join ordinary rails of the track, if it is found desirable to use the same, to avoid the necessity of springing the rails into the desired positions. The swiveled joint consists of a plate, 24, pivoted to a tie, or a plate, 25, bolted to the tie by a bolt or rivet, 26. Plate 24 is provided with dogs 27 27 for engaging the lower flanges of the rail and securing it to the plate.

At intersection of the inner rails, 28 and 29, of the branch track a frog, 30, is provided. Frogs may also be provided at the intersection of rails 7 and 28, and also at intersection of rails 8 and 29. Guard-rails 31 and 32 are provided to bring the wheels treading on the rails into the right position before reaching the split rails of the switch, and also to protect the free ends of the split rails. Lipped catches 33, Figs. 1, 2, and 5, are secured to one or more of the ties in such a position as to engage its outer lower flange of the split rails when thrown into position to receive the tread of the wheels, for the purpose of more fully securing the rail and prevent springing or spreading of the pair. Lipped catches may also be provided for securing the inner pair of split rails when thrown into position to receive the tread of the wheels.

In the use and operation of my switch, when the switch-lever is in its normal or ordinary position, as shown in Fig. 1, the outer pair of split rails are held against the rails 1 and 2 of the track, so that they will receive the tread of wheels passing along the track, and as thus used would make the middle track the main

track. Each of the split rails 3 and 4, as I usually construct my switch, are held against the outer rails by a spring tension. I accomplish this by allowing pin 16 and 17 to be a little farther from pin 16^a and 17^a, respectively, than the distance that the switch will be thrown by the movement of the lever from one catch to the next one. It will be observed that I operate both pairs of split rails by one lever, which is an advantage that I claim for my device. When it is desired to bring split rails 5 or 6 into contact with either rails 1 or 2, respectively, I throw lever 22 in the direction for accomplishing this result, in which movement, if rail 5 is to be brought into contact with rail 1, spring 15 is compressed sufficiently to allow rail 5 to come in contact with rail 1. If rail 6 is to be brought into contact with rail 2, the spring 14 will be compressed by power applied to lever 22 sufficiently to allow the rail 6 to be brought into contact with rail 22. While both branches are closed split rails 3 and 4 are held against the respective stationary rails 1 and 2 by a spring tension. This is an advantage that I claim for my switch in a three-way split switch, for the reason that a car moving off of either of the branches onto the main track while the switches are both closed will operate the rails against the springs 14 and 15, so that the car will move off onto the main track without becoming derailed or injuring the switch.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a railroad-track, of four split rails, a shifting-bar for operating the rails, stops on the shifting-bar, the split rails in couples being held between each pair of stops, and each split rail independently movable between the stops on the shifting-bar, and springs for keeping the rails of each couple apart.

2. The combination of the rails 1, 2, 3, 4, 5, and 6, the shifting-bar 9, and the springs 14 and 15.

3. The combination, with the stationary rails, of four movable split rails between the stationary rails, a shifting-bar for moving the split rails, two of the movable rails being adapted to be brought into contact with each of the stationary rails, the two being movable on the shifting-bar to which they are connected, the stationary stops on the shifting-bar, and a spring for separating the rails between the stops, substantially as set forth.

In witness whereof I have affixed my signature in presence of two witnesses.

JAMES D. BAILEY.

Witnesses:
MILTON E. ROBINSON,
LETTA F. STUART.